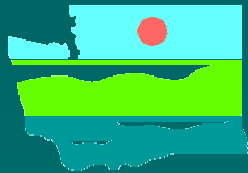


# Ecology's Environmental Information Management System

Sharing Data via the World Wide Web



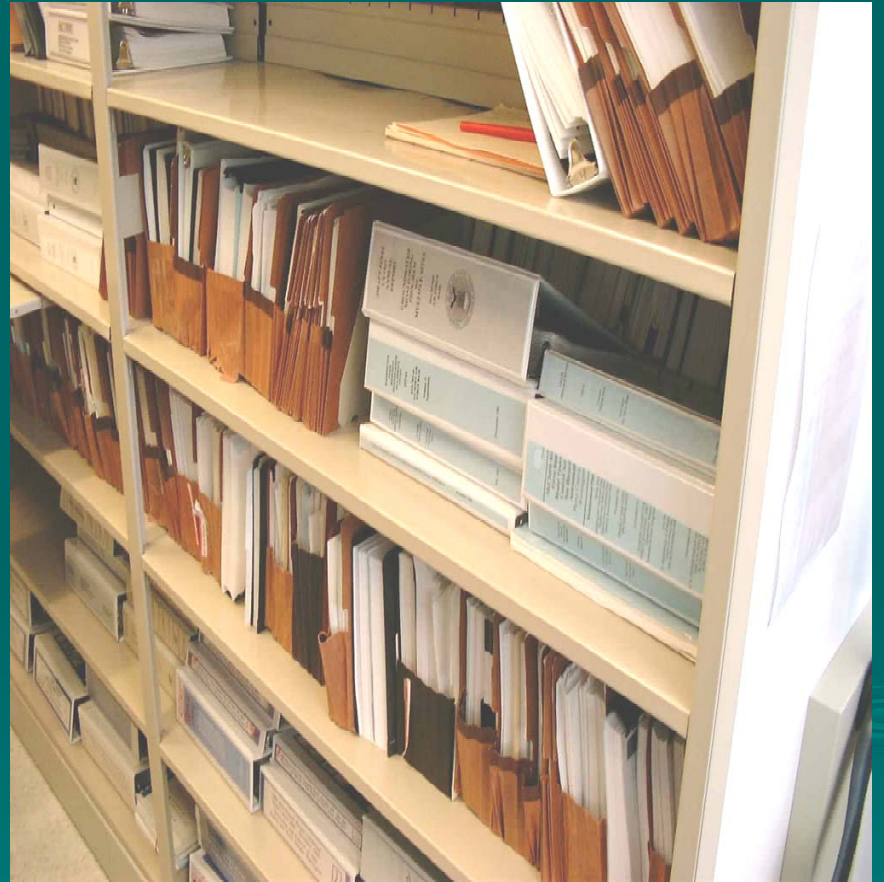
**Christine Neumiller**

**John Tooley**

Washington State Department of Ecology

# Why the Need for EIM?

- Idea conceived early 90's as part of Ecology's Information Integration Project
- Better way to access environmental monitoring data
  - Decision support
  - Demonstrate accountability
  - General accessibility
- Integrated electronic access the key to using and sharing data



# EIM's Early Days

## Fall 1997

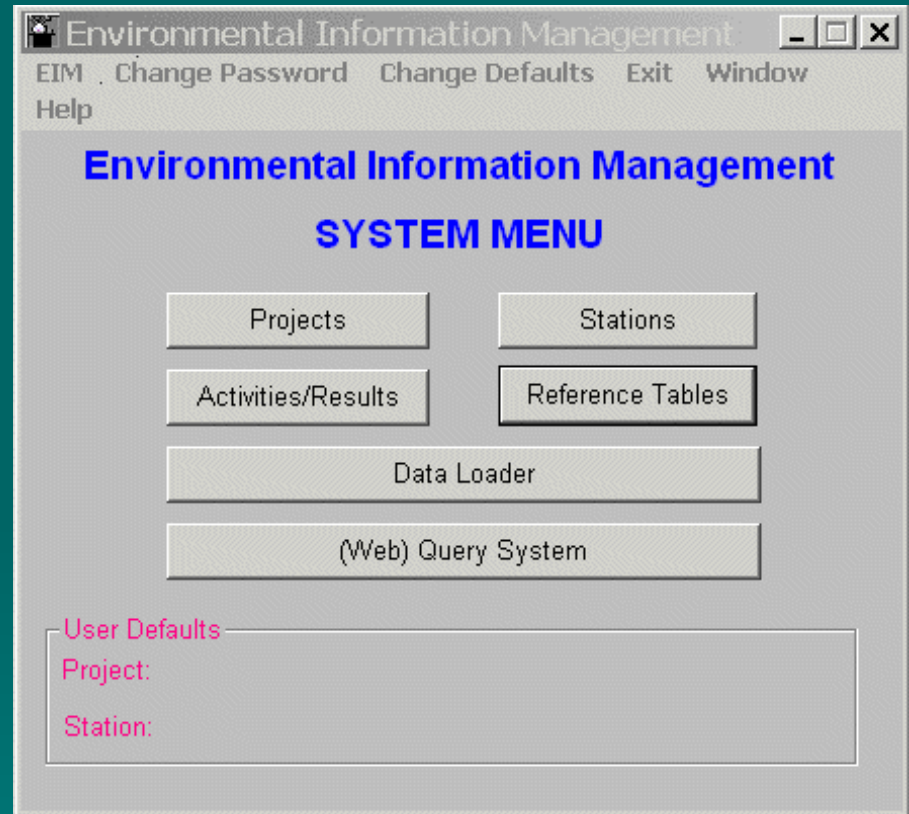
- First EIM production system launched

## Business logic from

- EPA STORET
- USGS NWIS
- Ecology needs

## Limitations

- No external access
- Reporting capacity



# Expanded Capability and Reach

## Fall 2001

- Web-based text reporting system launched internally

## Fall 2002

- Web-based text reporting system launched to the Internet

The screenshot shows the 'EIM Query System' web interface. At the top, there is a header with the 'accesswashington' logo and the title 'Environmental Information Management (EIM)'. Below this is a navigation menu with links: 'Ecology Home', 'EIM Home', 'EIM Query System', 'Search', 'Links', 'Export', and 'Help'. The main content area is titled 'Search' and features three tabs: 'STUDY', 'LOCATION', and 'RESULT'. A descriptive paragraph explains that a study or survey is an organized activity for monitoring, with specific objectives and quality assurance goals. Below the text are several search criteria fields: 'Study Purpose', 'Study Name', 'Study Identifier', 'Type of Search' (set to 'Containing'), 'Study Start Date', 'Study Status' (set to 'ALL'), 'QA Level' (set to 'Greater than or equal to 1'), 'WRIA' (set to 'ALL'), and 'County' (set to 'ALL'). Each of these fields has a dropdown menu showing a list of options. At the bottom, there are fields for 'Records per Page' (set to '100') and 'Sort Column' (set to 'Study Identifier Ascending'). 'Search' and 'Reset' buttons are located at the bottom right.

**Ecology Home**  
**EIM Home**  
**EIM Query System**  
**Search**  
**Links**  
**Export**  
**Help**

**EIM Query System**  
EIM data last updated on Saturday, March 15, 2003

**Search**

**STUDY** **LOCATION** **RESULT**

A study or survey is an organized activity or set of monitoring activities conducted for the purpose of collecting information about a given area or natural resource. Projects typically have specific objectives and most commonly have quality assurance goals described in a Quality Assurance Project Plan (QAPP). The QAPP's are used to ensure data of appropriate quality and suitability for planned uses.

**Study Purpose**   
**Study Name**   
**Study Identifier**   
**Type of Search**   
**Study Start Date**   
**Study Status**   
**QA Level**   
**WRIA**   
You may select multiple WRIs.  
01 Nooksack  
02 San Juan  
03 Lower Skagit / Samish  
04 Upper Skagit  
**County**   
You may select multiple counties.  
Adams  
Asotin  
Benton  
Chelan  
**Records per Page**   
**Sort Column**

**Search** **Reset**

# What Data Goes into EIM?

## Data Types

- Environmental monitoring data that will help determine the condition of Washington's air, land, and water

## Data Sources

- Ecology data, as well as external data such as Ecology affiliate, grantee, PLP, and volunteer



# EIM Data Structure

## Study

- Organized set of monitoring activities conducted for the purpose of collecting information about a given area or natural resource

## Location

- Physical location of sample collection, measurements, or observations

## Results

- Parameters determined by field measurements, physical observations, or analytical procedures performed on samples



**EIM**

# EIM Data Examples

## Study

- Coastal seawater intrusion study

## Location

- Monitoring well

## Results

- Water level in well



**EIM**



# EIM Data Examples

## Study

- Coastal seawater intrusion study
- Statewide river and stream ambient monitoring

## Location

- Monitoring well
- River monitoring station

**EIM**

## Results

- Water level in well
- Avg. Daily Temperature



# EIM Data Examples

## Study

- Coastal seawater intrusion study
- Statewide river and stream ambient monitoring
- XYZ Chemical site cleanup

## Location

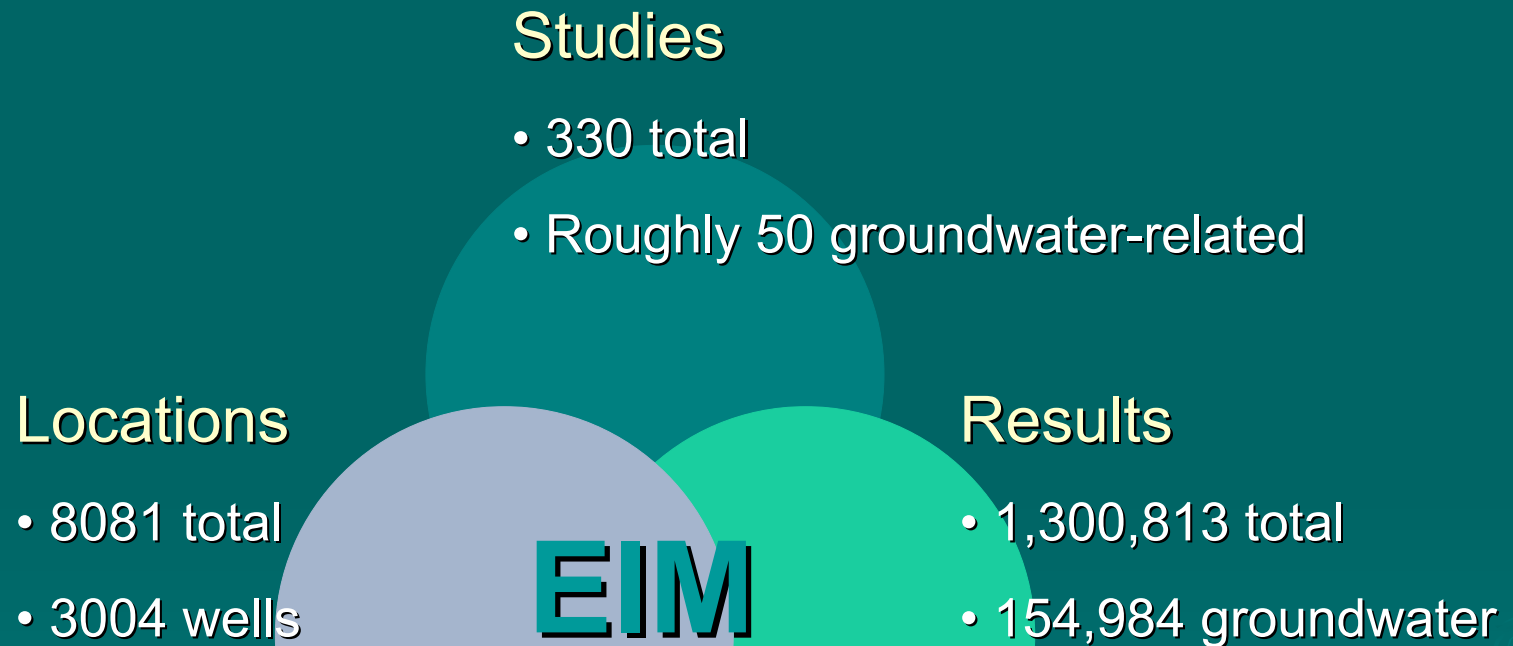
- Monitoring well
- River monitoring station
- Sediment station

**EIM**

## Results

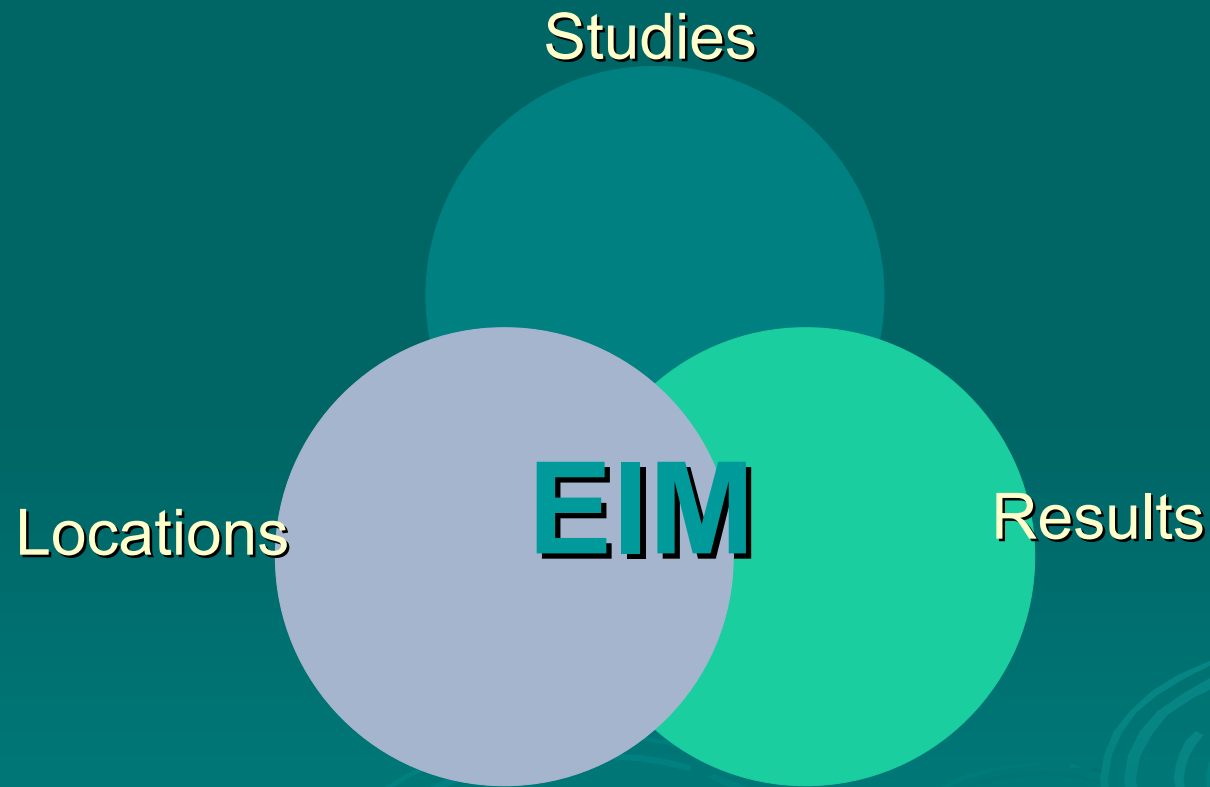
- Water level in well
- Avg. Daily Temperature
- Dibenzofuran


# How Much Data is in EIM?



Records as of 4/1/2003

# How Do I Get Data from EIM?



**@access**washington<sup>TM</sup>

Department of  
**Ecology**

[Search](#) | [Contact Us](#) | [E-Mail Lists](#) | [Site Info](#)

[Ecology Home](#)  
[About Ecology](#)  
[Directory](#)  
[Public Events](#)  
[Laws and Rules](#)  
[Publications / Forms](#)  
[Public Records](#)  
[Environmental Info.](#)  
[Services](#)  
[Programs](#)  
[Contracting](#)  
[Jobs](#)  
[Other Links](#)

Environmental data  
-- Quick Links --  
Beyond Waste  
Cleanup sites  
Columbia R. Initiative  
**Environmental data**  
GIS data / maps  
PBTs / Mercury  
Stormwater  
Soil Contamination  
TMDLs / 303(d)  
Vehicle emissions  
Well Log Viewer

# Welcome to the Department of Ecology

Ecology is Washington's principal environmental management agency, responsible for the wise management of our air, land and water for the benefit of current and future generations and sustainable communities and natural resources.

## NEWS

**[April 2: Large-scale livestock operations must apply for water quality permits by April 14....](#)**  
owners of certain dairies, feedlots and other large-scale livestock operations must apply for a water quality permit by April 14....

**[April 2: Cattlemen to use grant to protect water quality in Klickitat County](#)**  
help cattlemen in Klickitat County protect water quality in the Klickitat River watershed.

**[March 27: Shipping company fined \\$81,000 for spill in Longview....](#)**  
Shipping Company Ltd. of the Bahamas \$81,000 for spilling oil in the Longview area.

**[March 27: State lifts ban on sewer connections at Wilkeson and Onalaska, allowing the state to lift its sewer ban.](#)**  
Wilkeson and Onalaska, allowing the state to lift its sewer ban.

**[March 27: Toxics air emissions tackled by joint state and federal effort](#)**  
(Ecology) have joined forces to improve Spokane's air quality.

**[More Ecology News Releases ...](#) | [Ecology News](#)**

## Accessing EIM

- Go to Ecology Website at <http://www.ecy.wa.gov/>
- Choose “Environmental Data” from left drop-down box

# EIM Query System

Ecology Home

EIM Home

**EIM Query System**

Search

Links

Export

Help

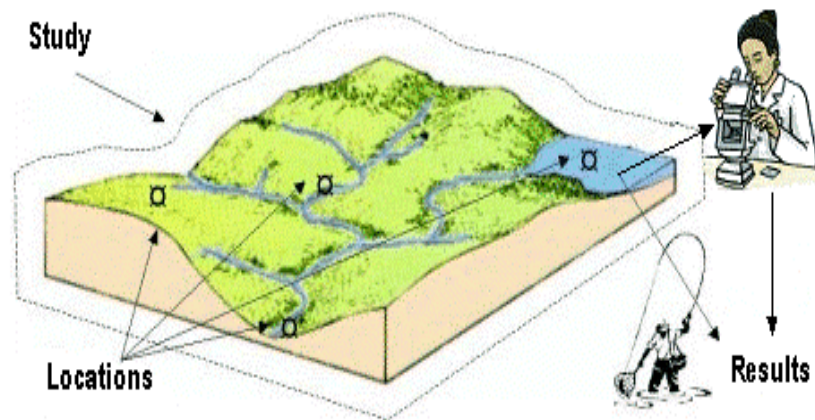
## Home

This is the home page for the Ecology Environmental Information Management (EIM) Web Query System. It provides physical, chemical, and biological environmental measurements. Extensive ancillary measurements is also stored, including the geographic location of the station where a sample was collected and information about the quality of the data.

Version 2.0

Please send feedback to [EIM Query Contact](#).

### Components of the Environmental Information Management System



[Environmental Information Management Data Disclaimer and Reliability Statement](#)

## Make initial choices

- Perform a custom search and then export the data
- Or go straight to pre-built export files for Studies, Parameters, Counties, or WRIAs

# EIM Query System

EIM data last updated on Wednesday, April 02, 2003

## Search

**STUDY****LOCATION****RESULT**

A study or survey is an organized activity or set of monitoring activities conducted for the purpose of collecting information about a given area or natural resource. Projects typically have specific objectives and most commonly have quality assurance goals described in a Quality Assurance Project Plan (QAPP). The QAPP's are used to ensure data of appropriate quality and suitability for planned uses.

**Study Purpose** **Study Name** **Study Identifier** Type of Search **Study Start Date** **Study Status** **QA Level** **WRIA**   
You may select  
multiple WRIAs.  
  
  
  
**County**   
You may select  
multiple counties.  
  
  
  
Records per Page Sort Column **Search****Reset**

## Search By Study

- Specify Study Purpose, Name, or ID
- Potential future addition of pick lists for Name and ID
- Leave blank to return entire list of Studies in EIM – but need to pick at least one filter criteria, like “Study Status Active”

Search

STUDY

LOCATION

RESULT

Stations represent the physical location of sample collection, measurements, or observations. A Station Identification Code and a Station Name uniquely identify each station. Stations are required to have a documented geographic location and these locations are reported as latitude and longitude values.

Location Name

Location Identifier

AAF226

Type of Search

Containing

Location Type

ALL

Location Status

ALL

Wells Only

WRJA

ALL

You may select multiple WRIAs.

01 Nooksack

02 San Juan

03 Lower Skagit / Samish

04 Upper Skagit

County

ALL

You may select multiple counties.

Adams

Asotin

Benton

Chelan

Records per Page

100

Sort Column

Station ID Ascending

## Search By Location

- Specify Location Name or ID
- Leave blank to return entire list of Locations in EIM – but need to pick at least one filter criteria, like “Location Status Active”
- Check “Wells Only” to return list of wells



# EIM Query System

*EIM data last updated on Saturday, March 15, 2003*

## Search

STUDY	LOCATION	RESULT
PARAMETER NAME	PARAMETER GROUP	CAS NUMBER

Results represent specific information about an environmental characteristic or measurement. Results are determined by field measurement(s), physical observation(s), or analytical procedure(s) performed on samples. Results are the basis for the analysis of environmental conditions.

**Enter Parameter Name**

Type of Search

**Matrix**

**Source**

**WRIA**   
 You may select multiple WRIAs.

01 Nooksack  
 02 San Juan  
 03 Lower Skagit / Samish  
 04 Upper Skagit

**County**   
 You may select multiple counties.

Adams  
 Asotin  
 Benton  
 Chelan

Records per Page

Sort Column



## Search Results By

- Parameter Name

Environmental Information Management (EIM)

EIM Query System

EIM data last updated on Saturday, March 15, 2003

Search

STUDY	LOCATION	RESULT
PARAMETER NAME	PARAMETER GROUP	CAS NUMBER

Results represent specific information about an environmental characteristic or measurement. Results are determined by field measurement(s), physical observation(s), or analytical procedure(s) performed on samples. Results are the basis for the analysis of environmental conditions.

Parameter Group

Metals

Matrix

ALL

Source

ALL

WRIA

ALL

You may select multiple WRIAs.

01 Nooksack

02 San Juan

03 Lower Skagit / Samish

04 Upper Skagit

County

ALL

You may select multiple counties.

Adams

Asotin

Benton

Chelan

Records per Page

100

Sort Column

by Parameter Name Ascending

Search

Reset

Search Results By

- Parameter Name
- Parameter Group

Search

STUDY	LOCATION	RESULT
PARAMETER NAME	PARAMETER GROUP	PARAMETER LIST
		CAS NUMBER

Results represent specific information about an environmental characteristic or measurement. Results are determined by field measurement(s), physical observation(s), or analytical procedure(s) performed on samples. Results are the basis for the analysis of environmental conditions.

Parameter

You may select multiple parameters.

Matrix

Source

WRIA

County

Isopropylbenzene (Cumene)

Kelthane

Klebsiella %

Lead

Lead-210

Lenacil

ALL

ALL

ALL

ALL

Adams

Asotin

Benton

Chelan

Records per Page

Sort Column

100

by Parameter Name Ascending

Search

Reset

Search Results By

- Parameter Name
- Parameter Group
- Parameter List

# EIM Query System

*EIM data last updated on Saturday, March 15, 2003*

## Search

STUDY	LOCATION	RESULT
PARAMETER NAME	PARAMETER GROUP	CAS NUMBER

Results represent specific information about an environmental characteristic or measurement. Results are determined by field measurement(s), physical observation(s), or analytical procedure(s) performed on samples. Results are the basis for the analysis of environmental conditions.

**CAS Number**

**Matrix**

**Source**

**WRIA**   
 You may select multiple WRIAs.

01 Nooksack  
 02 San Juan  
 03 Lower Skagit / Samish  
 04 Upper Skagit

**County**   
 You may select multiple counties.

Adams  
 Asotin  
 Benton  
 Chelan

Records per Page

Sort Column



## Search Results By

- Parameter Name
- Parameter Group
- Parameter List
- Chemical Abstracts Service (CAS) number

# EIM Query System

EIM data last updated on Wednesday, April 02, 2003

## Search

STUDY

LOCATION

RESULT

A study or survey is an organized activity or set of monitoring activities conducted for the purpose of collecting information about a given area or natural resource. Projects typically have specific objectives and most commonly have quality assurance goals described in a Quality Assurance Project Plan (QAPP). The QAPP's are used to ensure data of appropriate quality and suitability for planned uses.

**Study Purpose** **Study Name** **Study Identifier** Type of Search **Study Start Date** **Study Status** **QA Level** **WRIA**

You may select multiple WRIAs.

  
01 Nooksack  
02 San Juan  
03 Lower Skagit / Samish  
04 Upper Skagit**County**

You may select multiple counties.

  
Adams  
Asotin  
Benton  
ChelanRecords per Page Sort Column 

Search

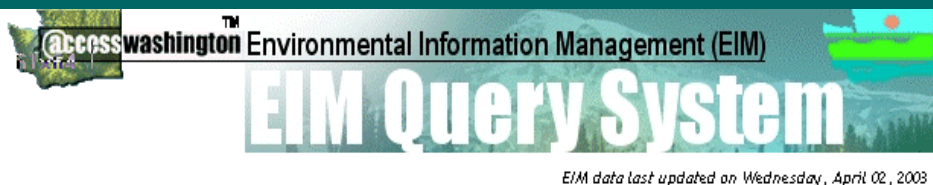
Reset

## Example - Search by Study Purpose

- Get list of Studies related to “ground water”
- Might need to try different combinations, like “groundwater”

# Example Search – List of Studies

- List of ground water-related Studies is returned with basic information
- Sort list by any column heading with arrows
- View Study detail by clicking on Study Name




[Back](#)

## Studies


[View Search Criteria](#)

Results 1-26 of 26

Click on a row to view more details.



<u>Study Identifier</u> ▲ ▼	<u>Study Name</u> ▲ ▼	<u>Study Status</u> ▲ ▼	<u>Study Start Date</u> ▲ ▼	<u>QA Level</u> ▲ ▼	<u>Locations</u>	<u>Results</u>	<u>Export</u>
<a href="#">WOODLAND</a>	<a href="#">Woodland Pesticides</a>	<a href="#">COMPLETED</a>	<a href="#">3/1/1993</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">QUILCEDA</a>	<a href="#">Water Quality in the Quilceda Creek Watershed</a>	<a href="#">COMPLETED</a>	<a href="#">1/1/1995</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">PILOT</a>	<a href="#">Washington State Agricultural Chemicals Pilot Study</a>	<a href="#">COMPLETED</a>	<a href="#">5/1/1988</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">WALLA WA</a>	<a href="#">Walla Walla Pesticides</a>	<a href="#">COMPLETED</a>	<a href="#">10/1/1993</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">TREE TOP</a>	<a href="#">Tree Top Land Application of Wastewater</a>	<a href="#">COMPLETED</a>	<a href="#">6/25/1992</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">TOFTDAHL</a>	<a href="#">Toftdahl Drum Site</a>	<a href="#">ACTIVE</a>	<a href="#">9/1/1988</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">TACOMA</a>	<a href="#">Tacoma Landfill</a>	<a href="#">ACTIVE</a>	<a href="#">6/27/1986</a>	<a href="#">3</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">KSIN0004</a>	<a href="#">SW/GW interactions - Muck Cr. watershed, Pierce Co</a>	<a href="#">QA INCOMPLETE</a>	<a href="#">8/25/1999</a>	<a href="#">4</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">METERING</a>	<a href="#">Statewide Metering of Surface and Ground Water</a>	<a href="#">ACTIVE</a>	<a href="#">2/11/1995</a>	<a href="#">1</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">SWROGWDB</a>	<a href="#">Southwest Regional Office Groundwater Database</a>	<a href="#">ACTIVE</a>	<a href="#">1/1/1970</a>	<a href="#">1</a>	<a href="#">Locations</a>	<a href="#">Results</a>	<a href="#">Export</a>



# EIM Query System

*EIM data last updated on Wednesday, April 02, 2003*

[Back](#)

## Study Detail

[Locations](#) [Results](#) [Export](#)



**Study Identifier** SWROGWDB

**Study Name** Southwest Regional Office Groundwater Database

**Study Status** ACTIVE

**Study Start Date** Thursday, January 01, 1970

**End Date** Monday, January 01, 1900

**Ecology Program** WR

**QA Level** 1

**Study Purpose** This project is a compilation of ground water level, collected from approximately 1200 wells by Ecology Program staff and affiliates. This ongoing effort was started in the 1970's.

**Study Lead** Sinclair, Kirk

**Study Area** SOUTHWEST WA (SWRO)

**Result Description**

**Quality Assurance**

**Special Requirements**

**Resource Estimate**

**Lab Cost Estimate**

**Bibliography**

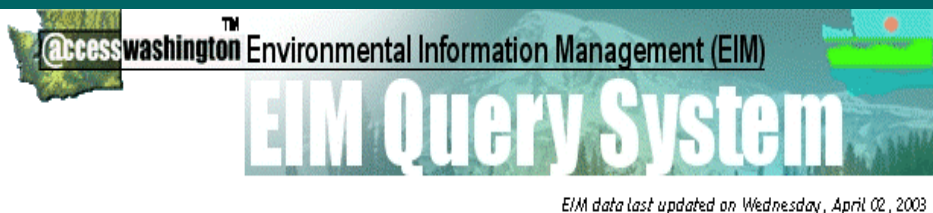
## Example Search – Study Detail Page

- Detailed information about Study
- Click links for list of associated Locations or Results



# Example Search – List of Study's Locations

- List of Locations used in Study is returned with basic information
- Sort list by any column heading with arrows
- View Location detail by clicking on Location Name




[Back](#)


## Study's Locations

[View Search Criteria](#)

Results 1-100 of 1069



<u>Location Identifier</u> ▲ ▼	<u>Location Name</u> ▲ ▼	<u>Location Type</u> ▲ ▼	<u>Well</u> ▲ ▼	<u>County</u> ▲ ▼	<u>Studies</u>	<u>Results</u>	<u>Export</u>
<a href="#">001CLR</a>	<a href="#">001CLR</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">CLARK</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">001JEF</a>	<a href="#">001JEF</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">JEFFERSON</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">001PRC</a>	<a href="#">001PRC</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">PIERCE</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">001THR</a>	<a href="#">001THR</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">THURSTON</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">002JEF</a>	<a href="#">002JEF</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">JEFFERSON</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">002PRC</a>	<a href="#">002PRC</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">PIERCE</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>
<a href="#">003CLR</a>	<a href="#">003CLR</a>	<a href="#">Land</a>	<a href="#">Y</a>	<a href="#">CLARK</a>	<a href="#">Studies</a>	<a href="#">Results</a>	<a href="#">Export</a>



# EIM Query System

EIM data last updated on Wednesday, April 02, 2003

[Back](#)

## Location Detail

[Studies](#) [Results](#) [Export](#) [Show On Map](#)

**Location Identifier** 001 CLR

**Location Name** 001 CLR

**Location Status** ACTIVE

**Location Type** Land

**Well** Yes

**PLA Indicator** Point

**Elevation** 415 FT

**Location Description**

**Position** monitoring station

**Coordinate System** LAT/LONG

**Latitude** 45 36 24

**Longitude** 122 26 1

**Horizontal Collection Source** "1:24,000

**Horizontal Datum** North American Datum 1927 - NAD27

**Horizontal Accuracy** +/- 250 feet

**Horizontal Collection Method** Digitized - paper map

**Vertical Reference** Elevation from mean sea level

**Vertical Datum** NGVD29

**Vertical Accuracy** +/- 10 feet (3 meter)

**Vertical Collection Method** Map Derived

**City**

**State** WA

**Zip**

**County** CLARK

## Example Search – Location Detail

- Page with detailed information about a specific Location
- Click “Show on Map” link to plot Location on map

# Example Search - Maps

- View Location on map
- USGS topographic background

Environmental Information Management (EIM)

## EIM Query System

**Location Map:** 001CLR

Click or drag on the map to:

- ☒ Zoom In
- ☐ Zoom Out
- ☐ Pan

Set background image to:

- ☒ USGS Topo Map
- ☐ Aerial Imagery

Legend:

- ★ Selected EIM Location
- Other EIM Locations








# Example Search - Maps

- View Location on map
- Aerial imagery background



Location Map:	001CLR
<p>Click or drag on the map to:</p> <ul style="list-style-type: none"><li><input checked="" type="radio"/> Zoom In</li><li><input type="radio"/> Zoom Out</li><li><input type="radio"/> Pan</li></ul>	
<p>Set background image to:</p> <ul style="list-style-type: none"><li><input type="radio"/> USGS Topo Map</li><li><input checked="" type="radio"/> Aerial Imagery</li></ul>	
<p>Legend:</p> <ul style="list-style-type: none"><li> Selected EIM Location</li><li> Other EIM Locations</li></ul>	

# EIM Query System

*EIM data last updated on Wednesday, April 02, 2003*

[Back](#)

## Study Detail

[Locations](#) [Results](#) [Export](#)



**Study Identifier** SWROGWDB

**Study Name** Southwest Regional Office Groundwater Database

**Study Status** ACTIVE

**Study Start Date** Thursday, January 01, 1970

**End Date** Monday, January 01, 1900

**Ecology Program** WR

**QA Level** 1

**Study Purpose** This project is a compilation of ground water level, collected from approximately 1200 wells by Ecology Program staff and affiliates. This ongoing effort was started in the 1970's.

**Study Lead** Sinclair, Kirk

**Study Area** SOUTHWEST WA (SWRO)

**Result Description**

**Quality Assurance**

**Special Requirements**

**Resource Estimate**

**Lab Cost Estimate**








**Bibliography**

## Example Search – Study Detail Page

- Exports
- Export Study detail, Location detail, and Results in a ZIP file

## Example Search - Exports

- Download Study details, Location details (including additional information for wells), and Results
- CSV format
- Compatible with MS Excel, Access, or similar products

Name	Type	Modified	Size	Ratio	Packed
 EIM_Study_Export_Definitions.htm	HTML Document	8/19/2002 6:54 AM	93,476	81%	17,372
 SWROGWDB-Study.csv	Microsoft Excel ...	3/30/2003 7:23 AM	869	45%	478
 SWROGWDB-Locations.csv	Microsoft Excel ...	3/30/2003 7:23 AM	412,519	86%	58,082
 SWROGWDB-Results.csv	Microsoft Excel ...	3/30/2003 7:23 AM	11,732,...	93%	799,204
 SWROGWDB-Well_Stations.csv	Microsoft Excel ...	3/30/2003 7:23 AM	189,490	87%	24,109
 SWROGWDB-Well_Interval.csv	Microsoft Excel ...	3/30/2003 7:23 AM	396	49%	201
 SWROGWDB-Measuring_Point.c...	Microsoft Excel ...	3/30/2003 7:23 AM	73,997	85%	11,207

Selected 0 files, 0 bytes      Total 7 files, 12,211KB

EIM data last updated on Wednesday, April 02, 2003

Back

Study Detail

[Locations](#) [Results](#) [Export](#)

**Study Identifier** AJOH0011

**Study Name** Walla Walla River Chlorinated Pesticide and PCB TMDL

**Study Status** ACTIVE

**Study Start Date** Monday, April 01, 2002

**End Date** Monday, January 01, 1900

**Ecology Program** EAP

**QA Level** 4

**Study Purpose** Monitor levels of legacy chlorinated pesticides and PCBs (via water and sediment) in the Walla Walla River and to ultimately form contaminant load allocation

**Study Lead** Johnson, Art

**Study Area**

**Result Description**

**Quality Assurance**

**Special Requirements**

**Resource Estimate**

**Lab Cost Estimate**

**Bibliography**

[Second Screening Investigation of Water and Sediment Quality of Clallam and Skagit Counties, Washington, with Emphasis on Metals](#)

[Screening Level Investigation of Water and Sediment Quality of Clallam and Skagit Counties, Washington, with Emphasis on Metals](#)

Example Search – Study Detail Page


- Online reports
- When available, click link to see online report





# Example Search

- View online report from Ecology publications

Department of Ecology

Publications

Publication Summary

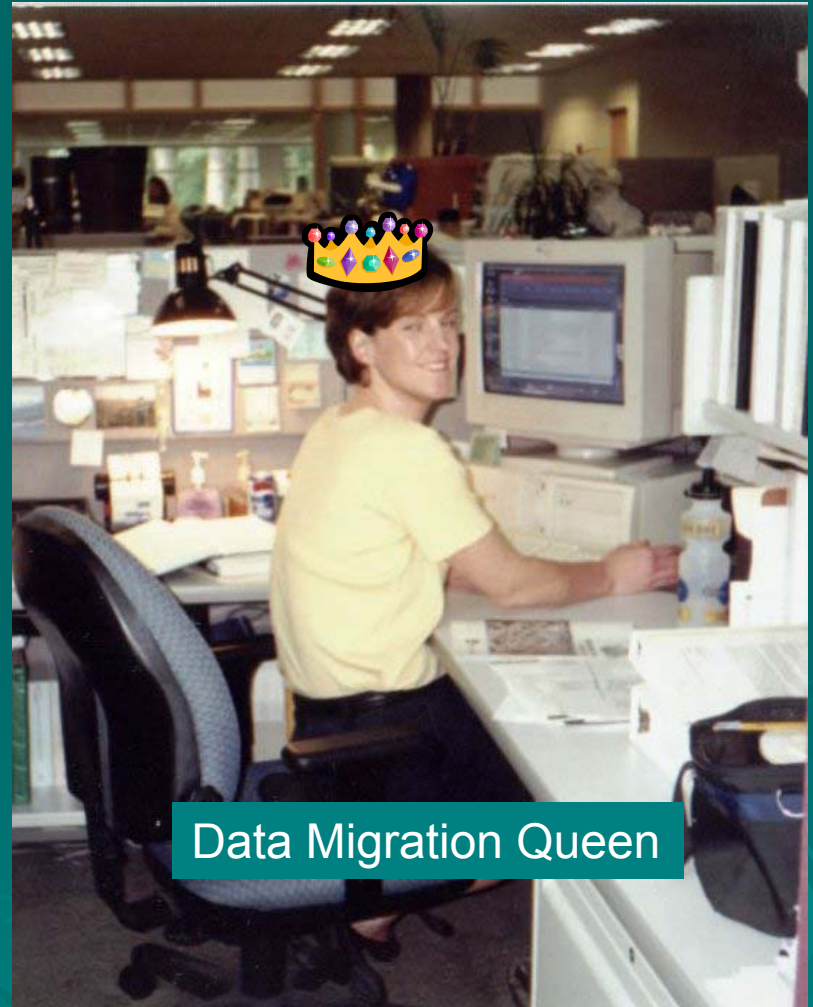
search

TITLE	Second Screening Investigation of Water and Sediment Quality of Creeks in Ten Washington Mining Districts, with Emphasis on Metals
MONTH-YEAR PUBLISHED	June 2002
ONLINE AVAILABILITY	<a href="#">View this publication in Acrobat PDF format</a> 1912 kilobytes, requires version 4.0 or later of <a href="#">Adobe Acrobat Reader Software</a>
SHORT DESCRIPTION	This study was designed to characterize water and sediment quality in streams that drain ten metals mining districts in Washington State. The districts were selected based on a preference for sites at high elevation, located in western Washington, or that had arsenic or mercury as primary or secondary minerals. The water quality emphasis for the study was the EPA ultra-clean sampling and low-level analysis methods for metals. General chemistry and field parameters were obtained concurrently with the metals and sediment samples. This study was similar in design to a study conducted by the same authors in 1997. <i>(Also see abstract below.)</i>
PUBLICATION NUMBER	02-03-024
AUTHOR(S)	Raforth, R., Norman, D., and A. Johnson.

# What's Next?

## More Data

- Continued migration of legacy datasets and addition of new data
- Example
  - Groundwater database for Ecology's southwest region
  - 1069 Locations
  - 35,002 water levels
- Similar database from Ecology's eastern region to be migrated this year



Data Migration Queen

# What's Next?

## Expanded Search Capability

- Date range filter
- Parameter range filter
  - Example – Search for Benzene concentrations between .01 and 1 ppm
- Ability to do this by specific Study or Location

**Advanced Results Search**

**Advanced Search Criteria**

- **Parameter Name:** Water level in well (relative to Land Surface)
- **Matrix:** ALL
- **Source:** Groundwater
- **WRIA:** ALL
- **County:** ALL

**Look for Value**

**Value One**

**Value Two**

**Unit of Measure**


**Matrix?**

**Source?**

# What's Next?

## Other Improvements

- Link to new Well Logs database from Location detail page, when applicable
- Improved Website



The screenshot displays the 'Well Logs' section of the Washington Department of Ecology website. The header includes the '@accesswashington' logo, the department name, and a navigation bar with links like 'Water Docs', 'Home', 'Text Search', 'Map Search', 'Site Info', 'Forms', and 'Contact Us'. On the right, there are links for 'Water Resources', 'Links', 'Disclaimer', and 'Privacy Notice'. The main content area shows 'TEXT SEARCH RESULTS' with a search bar and buttons for 'Back ...' and 'New Search'. Below this, search criteria are listed: 'Well Tag ID: abt908', '1 well logs that match your search criteria', and 'results sorted by Well Tag ID'. There are also links to 'Download all 1 Images', 'Download all 1 Records', 'Print this Page', and 'Help'. A green bar indicates 'Displaying 1 - 1 of 1 well log results'. The first result is for 'DR. BURTON | FOES & SULLIVAN', providing details on the public land survey, county (CLARK), well address (NE CRNR OF NW 209 ST & NW LAMBERT RD, RIDGEFIELD), well log ID (236206), well tag ID (ABT908), notice of intent number (W074977), well diameter (6 inches), well depth (400 feet), well type (Water), well completion date (10/23/1995), and well log received date (11/9/1995).

**Well Logs**

Water Docs Home Text Search Map Search Site Info Forms Contact Us

TEXT SEARCH RESULTS

Back ... New Search

- Search Criteria Used: Well Tag ID: **abt908**
- There are **1** well logs that match your search criteria.
- The results are sorted by **Well Tag ID**.

 [Download all 1 Images](#) |  [Download all 1 Records](#) |  [Print this Page](#) |  [Help](#)

Displaying 1 - 1 of 1 well log results

1. **DR. BURTON | FOES & SULLIVAN** - { [view PDF](#)  | [view TIFF](#)  }

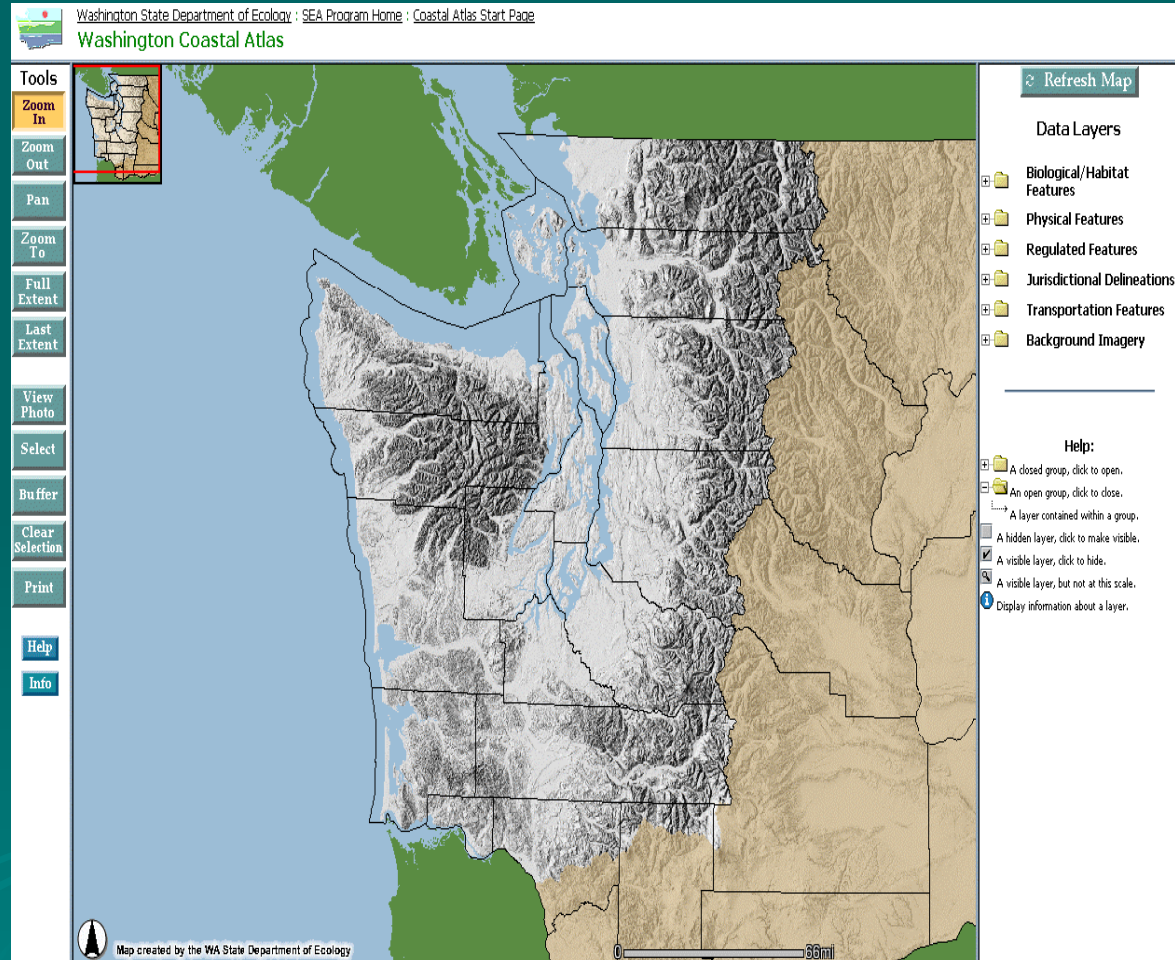
Public Land Survey: **SW, NW, S-03, T-01-N, R-01-E**, Tax Parcel Number: (blank)  
County: **CLARK**, Well Address: **NE CRNR OF NW 209 ST & NW LAMBERT RD, RIDGEFIELD**  
Well Log ID: **236206**, Well Tag ID: **ABT908**, Notice of Intent Number: **W074977**  
Well Diameter: **6 (inches)**, Well Depth: **400 (feet)**  
Well Type: **Water**, Well Completion Date: **10/23/1995**, Well Log Received Date: **11/9/1995**



# What's Next?

## Expanded GIS Capability

- Similar to current Ecology GIS applications, like Coastal Atlas
- Ability to conduct searches via a map interface
- Ability to plot results of a text search on a map
- Planned release – July 2003



# For Further Information

- Visit our online demo in the Exhibitor area
- URL: <http://apps.ecy.wa.gov/eimreporting>
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